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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,989

01/16/2007

Benoist Sebire

915-001.082

7127

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02/23/2009

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EXAMINER

WOO, KUO-KONG

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

02/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,989	Applicant(s) SEBIRE ET AL.	
	Examiner KUO WOO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 4/06/2006 in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Priority

2. Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. This application is a 371 of PCT/FI03/00732 on 10/06/2003.

Drawings

3. The drawings submitted on 1/16/07. These drawings are reviewed and accepted by the examiner.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 14 is drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1 (a) (Functional Descriptive Material) states:

“Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.”

“Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure’s functionality to be realized.”

Claim 14, while defining a computer executable program adapted to execute the step of claim 1, does not define a “computer-readable medium” and is thus non-statutory for that reasons. A computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium” in order to make the claim statutory.

“In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.” - MPEP 2106.IV.B.1 (a)

Since claim 1 is a method /process and is not explicitly “tied” to a statutory class, Examiner believes the step of “transmitting a TFCS reconfiguration message to a terminal over certain basic physical sub channel is inherently tied to statutory device, namely base station or mobile station or radio terminal.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Erikson et al. (US Patent Application Number 20020167969 A1).

Regarding claim 1, “wireless system utilizing a flexible layer one to transfer data over the air interface” Erikson discloses (Abstract, Flexibly configurable layer one transport channels produce radio blocks in response to communication information and extract communication information from radio blocks) and (An information source can produce for each transport channel first configuration information and second configuration information), and (the physical layer can include a description information source that provides description information from which various configurations of the transport channels can be determined.),

“ Flexible layer one to transfer data over the air interface”(¶ 053, a group of transport formats that define the layer one transport channels for a given call are referred to herein as a transport format combination (TFC).);

“ TFCI is indicated by the message”(¶ 088, This results in a total of 6 TFCs specified in the TFCS descriptor, namely, the 4 TFCs for the 4 available codecs, one TFC for the call control signaling, and one TFC for the silence information descriptor.),

“Either starting to use a new configuration” (¶034, wherein the second configuration information is indicative of how the associated transport channel is to be configured if a second modulation type is used for the current radio block);

“Use a new or existing configurations” (¶063, as shown in FIG. 4, the radio block includes a TFCI portion (e.g., a layer one header) which indicates the transport format combination that has been used at the transmitter and should therefore be used at the receiver also) and (¶ 066, in the embodiment of FIG. 6, a 1 bit field which indicates whether or not interleaving is to be used within L1TC (TFCI). During reception, the output bits field of course specifies the number of bits that will be input to L1TC (TFCI). In some embodiments, L1TC (TFCI) is configured to provide better performance than the most robust of L1TC (1)), wherein on the basis of which either starting to use a new configuration indicated by the message, or staying with the existing configurations.

Regarding claim 2, *“wherein the one transport format combination relates to exactly one active transport channel with a predetermined block size and Cyclic Redundancy Check size”* Eriksson discloses (¶ 066, during transmission is implicitly known from knowing the number TFCs), a field which specifies the type of CRC coding/decoding that will be applied in L1TC (TFCI), a field which specifies the type of error correction coding/decoding that will be implemented in L1TC(TFCI)), wherein according to TFC apply radio block with CRC size.

Regarding claim 3, “wherein said parameter indicates a change of a basic physical sub channel utilized by the terminal (physical radio channels) and ordered by the network (GERAN or UTRAN)”. Eriksson discloses (¶ 07, in conventional radio access

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networks such as GERAN or UTRAN, layer one of the radio interface provides transport channels which either transport information from higher layers to the actual physical radio channel(s), or which transport information received from the actual physical radio channel(s) to the higher layers), wherein basic channel utilized by radio terminal and ordered by network.

Regarding claim 4, has limitations similar to those treated in the above claim 3 rejection(s), and are met by the references as discussed above.

Regarding claim 5, “wherein said certain identifier is valued zero” Eriksson discloses (¶99, FIG. 14 illustrates exemplary operations which can be performed in response to Send Up bits when incremental redundancy is supported. At 141, L1TC (TFCl) is enabled so that the TFCI information can be examined to determine which TFC is being used) and (¶100, Soft values are real numbers, indicating both the value (1 or 0) of a received bit, and the likelihood that the bit was correctly received), wherein certain identifier is valued zero.

Regarding claim 6, has limitations similar to those treated in the above claim 3 rejection(s), and are met by the references as discussed above.

Regarding claim 7, “wherein the one transport format combination with the certain transport format combination identifier indicated by the transport format combination set reconfiguration message is independent of the other transport format combinations indicated by the message” Eriksson discloses (¶65, The RRC (or RR) layer can be designed according to the invention to find a suitable configuration (specified by a TFCS descriptor) of layer one transport channels to fulfill the

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requirements in the RAB request, and at the same time economize with respect to resource utilization in the radio access network), and (The RRC (or RR) layer in GERAN (for example in a BTS of GERAN) can send the TFCS descriptor to the physical layer of GERAN, and can also send the TFCS descriptor to the RRC (or RR) layer of the mobile station), wherein each reconfiguration message can send to physical layer or RRC layer.

Regarding claim 8, “wherein the size (Value) of transport format combination identifiers is fixed” Eriksson discloses (§57, The assembler 16 can assign transport format combination indicators (TFCIs) which uniquely identify the respective transport format combinations of the set specified by a given TFCS descriptor. The transport format assembler 16 can use the TFCI to index each of the transport format combinations in the storage device 14, and the call ID can be used to index the desired transport format combination set in device 14. The assembler 16 can assign TFCI values, for example, in the order in which it produces and stores the TFCs of the TFCS), wherein size of TFCS uniquely identify by TFCS descriptor.

Regarding claim 9, “wherein the size is fixed to a maximum allowable size” Eriksson discloses (§57. In some embodiments, TFCI for a given TFCS can have values from “1” through the total number of TFCs in the TFCS), wherein maximum allowable size is total number of TFCs in the TFCS.

Regarding claim 10, Apparatus (device) claims are drawn to the apparatus corresponding to the method of using same as claimed in claim 1. Therefore apparatus

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claims 10 correspond to method claim 1, and are rejected for the same reasons of (anticipation or obviousness) as used above.

Regarding claim 11, "is substantially a base station, a base station controller, a combination of a base station and a base station controller, or a mobile station".

Eriksson discloses (¶ 52, a radio transceiver within a mobile station of the type generally shown at 13 in FIG. 1, or a radio transceiver within a base transceiver station (BTS) of the type generally shown in FIG. 1), wherein system include base station and mobile station.

Regarding claim 12, has limitations similar to those treated in the above claim 11 rejection(s), and are met by the references as discussed above.

Regarding claim 13, has limitations similar to those treated in the above claim 3 rejection(s), and are met by the references as discussed above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson as applied to claim 1 above, in view of Yu et al. (US Patent Application Number 20050068894 A1).

Regarding claim 14, Eriksson discloses "wireless system utilizing a flexible layer one to transfer data over the air interface in claim 1. However, Eriksson does not

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explicitly disclose” a computer executable program adapted to execute the steps of claim 1” ‘

In an analogous art, Yu discloses (§85, these computer program instructions may be loaded onto a computer or other programmable apparatus to produce a machine, such that the instructions which execute on the computer or other programmable apparatus create means for implementing the functions specified in the flowchart block(s) or step(s)), wherein computer program able to execute the step of claim 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Eriksson teaching in combination of Yu provides bi-directional communication between hosts and, more particularly, relates to systems and methods of bi-directional communication between hosts with Increased throughput. ((See ¶ 01 Field of Invention) .Rationales for arriving at a conclusion of obviousness suggested by the Supreme Court’s decision in KSR include: Combine prior art elements according to known method to yield predictable result.

Regarding claim 15, has limitations similar to those treated in the above claim 14 rejection(s), and are met by the references as discussed above

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant’s disclosure.

- US Patent Application Number 2002/0128035 A1 to Jokinen et al. discloses a similar invention as recite in claim 1

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- US Patent Number 7,408,904 B2 to Terry. discloses a similar invention as recite in claim 1
- US Patent Number 6,473,422 B2 to Lundsjö et al. discloses a similar invention as recite in claim 1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KUO WOO whose telephone number is (571)270-7266.

The examiner can normally be reached on Monday through Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617

/KUO WOO/
Examiner, Art Unit 2617

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